

MADUXNAKEAG RIVER--SEPT.5, 1893.

Mr. Henry Hathaway, Houlton, says that salmon, years ago, used to come up this river to its extreme upper waters. It was a good river for salmon. They used to be seen below the dam at Houlton, and below the fall at the site of the flour mill, about  $2\frac{1}{2}$  miles up from Houlton.

HOULTON, ME., SEPT. 5, 1893.

(Arrived from Woodstock, N. B., 8-30 A. M.)

Only one saw mill now in the village, on Maduxnakeag River, just above the bridge. It is located about ten rods from the main stream, on a very small brook. There is much low land about the mill, where cut lumber and great piles of old and new edges are piled. High water would cover much of the edgings, but being back from the river, it is hard to say whether freshets would tend to carry much away or not.

This mill belongs to F. W. Titcomb. Steam mill; contains 1 rotary, 1 edger, 1 lath machine, 2 shingle machines, 1 clapboard machine and planer, 2 board planes. Annual cut about as follows:-

4,000,000 ft. long lumber,  
laths,  
shingles,  
clapboards.

They have boiler furnace only.

Nothing is allowed to go into the river. Nothing could go in directly. Burn all shingle waste, most of the rotary and lath sawdust, all planer shavings, and a few of the edgings. Some sawdust is disposed of about town. The lath edg-

ings are piled up about the mill, and sold as fast as possible. They now have a large amount on hand.

There has been a mill on this same side about 18 years. Mr. Titcomb was the first one to occupy the site.

Shingle waste and other sawdust carried to furnace by chain belts.

The foreman thought a law had been passed, perhaps five or six years ago, regarding the throwing of waste into the river.

Quantities of shingle waste come down the river, and give them some trouble about the logs. Not very serious now, however, (Has been mostly stopped through efforts of Mr. Titcomb).

There is a dam directly below the bridge in Houlton. It extends across the river, has wide apron and gate; no fishway. Used by several grist mills, starch factory, electric light, etc. There is now a height of about ten feet from surface of water below to crest of dam.

While standing on bank at this point, saw quantity of hardwood sawdust and fine shavings thrown out into river, from carriage factory over starch mill. Many bushels.

The riverchannel at this place is dirty, but no more so than in any town, where there are not strict regulations. Town refuse.

The bottom of river is rocky and rough, generally in this neighborhood. The water is now very low, and things are not looking their best.

The next dam above the one in the town is that at Sincock's mill. On the so-called north branch(of the south branch) the first dam is at Geo. L. Hammond's. There are some other dams further up same stream.

MILL OF S. H. SINCOCK, JR.

On south branch of the Maduxnakeag, between one and one and one fourth miles above Houlton village. Water mill. Dam, without fishway. Runs all the year when there is sufficient water. Runs most of the time. Has 1 rotary, 1 edger, 1 lath and 1 shingle machine.

Saws annually about

1,500,000 ft. long lumber,  
1,000,000 laths,  
1,000,000 shingles. Have cut no shingles  
this year.

Has provided for all waste which is hauled out of mill. The first mill in this place was built about 1852. Up to three years ago all the waste was sluiced into the river. F. W. Titcomb then brought lawsuit against him, and since then has provided for waste. Sincock has been running this mill ten years.

The lower floor has been rebuilt so as to take care of waste, and prevent going into stream. There is a great deal of edgings and sawdust piled on bank, where it must come, more or less, under the influence of spring freshets. Mostly old stuff, however.

Says they sluice their waste at the mills  
above(not entirely true at least).

Much shingle drift comes amongst his logs,  
and causes him much trouble. We saw a great deal.

Next visited mill of Morrill Mansur, who gave us the following information about his own and several other mills.

### MORRILL MANSUR.

West branch of south branch of Maduxnekeag, about  $2\frac{1}{2}$  miles from Houlton village, by road. Water saw mill. Also starch factory connected with it. Former contains 1 rotary and 1 lath machine. Has dam with no fishway. At present saws only a little, for custom work only. No long lumber, but about 200,000 laths this summer. Sawdust all goes into river. Makes fire wood of the other rubbish. Was restrained from putting in larger waste by Titcomb, same as Sincock. Previously had put everything into the river, which he did not want for some purpose.

Matthew Mill.  $\frac{3}{4}$  of a mile up from Mansur, on the same stream. Water mill, dam, and no fishway. Contains 1 rotary, 1 lath, 1 shingle machine, 1 planer; does quite a business; saws annually about

1,000,000 ft. long lumber,  
1,000,000 or more shingles,  
1,000,000 or more laths.

He is supposed to burn all his shingle re-

this season, Sawdust  
fuse, but did put some into stream, some used for  
goes into stream.  
banking. No edgings go into stream(Mansur).

Shaws Tannery & Saw Mill, about four miles up stream from Mansur. Saw mill not much used now. Contains rotary & shingle machine, water mill, dam, no fishway. Probably saws mainly for his own use. Does no shipping. Cannot tell what he does with waste(Mansur).

Moses Drew, 6 miles up stream from Mansur's, Rotary, clapboard machine, and may have shingle machine. Also has bath machine and planer. Is located just below a lock and thus has plenty of water. Water mill, dam, no fishway. Does considerable business and ships lumber by rail. Saws some hard wood. Does not know what is done with refuse (Mansur).

James Ruth, on a small branch in Linneus, water mill. Does small business(Mansur).

F. W. Titcomb, on another branch which comes in below the tannery. 2 mills, water, dam; no fishway, 1 rotary, several shingle machines. Saws a lot of shingles. All waste goes into the



stream. This was also going on when he sued Sincock and Mansur. However, his waste does not come down past Mansur's mill, but seems to be held up there in some way; he thought because there was not enough water in the side stream(Mansur).

Geo. L. Hammond, north branch of south branch of Maduxnekeag, about two miles above its mouth. Small steam mill containing rotary. Also has a dam and uses water at times. Used to make some shingles. Cannot say whether he does now or not. Ships some, but saws mostly for local trade (Mansur).

There are two more mills farther up on this stream in B. Township. One belongs to Mitchill, the other to McConnell(Mansur).

Mr. Mansur says there is no trouble with waste down this latter stream. Only a small amount of sawdust is put in.

Does not the Ashburton Treaty provide for the building of fishways on dams in streams flowing into the St. John River from Me.? That is, their building in New Brunswick?

# STARCH MAKING, HOULTON, SEPT. 5, 1893.

The following was given us by Waldo G. Brown, one of the starch makers.

The potatoes are first washed. They are then grated very fine on graters, revolving cylinders, punched like nutmeg graters. This fine material is deposited on large sieves(very fine mesh copper netting), which are slightly inclined, and kept constantly in motion. Water drops steadily on to these sieves, carrying the starch through them into a trough below, which leads to large vats in which the starch settles.

The so-called pumice(all that is left on the sieves) floats from the top of the sieve, and is carried to the river. The pumice consists of peelings and the pulp or fibrous matter.

The starch on settling in the vats hardens. The water is drained off. The starch is removed to drying rooms, when it is dried by steam heat. It is kept stirred up while drying, and comes out a very fine powder. It is used chiefly for sizing prints and cottons in cotton mills; also used for making molds for fancy candies, and for other purposes.

It requires further refining before it can be used for laundry and cooking purposes. This is not done here. Their starch, while pure, is a little off color, etc.

The pumice after going into the river sinks and remains there about a couple of days. It then rises to the surface and passes off with the current, leaving no trace. It is not considered to be harmful in any way (Mr. Hathaway says in some places considered to furnish food for fishes).

90% of the potato is water. They use only the culls, not the best potatoes for starch.

They get from seven to nine pounds of starch from a bushel of potatoes.

There are three starch factories in Houlton. Used 100,000 bushels of potatoes last season. The season begins between first and middle of September and continues to about November 1.